UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,851	03/18/2004	Shinsuke Toyomasu	250560US0	5866

22850 7590 03/02/2007

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
MESH, GENNADIY	
ART UNIT	**PAPER NUMBER**
1711	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/02/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/02/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

C

Office Action Summary	Application No.	Applicant(s)	
	10/802,851	TOYOMASU ET AL.	
	Examiner	Art Unit	
	Gennadiy Mesh	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *1,2 and 7-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-6 and 11-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 05/18/2004
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant Amendment filled on January 11, 2007 is acknowledged.

Claims 1-15 are pending. Claims 1,2 and 7-9 are withdrawn. Claims 11-15 are newly added.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 3-6 and 10 - 15 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 7,001,967 in view of information admitted by Applicant(see paragraph [0004] and [0005],page 1) and in further view of Arakawa et al.(US 5,213,852). Optical film,

exhibiting negative birefringence claimed by Applicant in Claims 3-6 and 10 comprises two components: first – copolymer of specific olefin and N-phenyl-substituted maleimide, exhibiting Tg about 200^0C and negative birefringence, claimed in U.S. Patent No. 7,001,967 and second component – acrylonitrile-styrene based copolymer, exhibiting Tg about 100^0C and negative birefringence disclosed in U.S. Patent 5,213,852.

U.S. Patent No. 7,001,967 does not teach use of second component in composition claimed by applicant. However, Applicant admits, that prior art teach that both components are fully miscible and formed thermodynamically stable blend (see paragraph [0005],page 1). Applicant also admits that prior art teach (see paragraph [0004],page 1) that Tg about 140^0C is preferable for this type of optical films. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention use combination of two components, exhibiting same intrinsic negative birefringence properties, in order to obtain composition for optical film with resulting Tg about 140 ^{0}C.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-6 and 10 -15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi et al.(JP 05-117334) and in view of Arakawa et al.(US 5,213,852).

5. Satoshi discloses identical basic copolymer as Component A claimed by Applicant and teaches that this copolymer can exhibit low positive intrinsic birefringence or negative apparent (at stressed state) birefringence, which was expected by theoretical calculation(see paragraph [0026],page 3 and Example 2). Same art also teaches that blend of two different polymers (see paragraph [0022],page3) will exhibit intermediate resultant birefringence. Satoshi point out that styrene contain polymers will have negative birefringence , but silent about use of acrylonitrile-styrene copolymers for this purpose. However, Arakawa discloses (abstract, lines 20-40,column 3) acrylonitrile-styrene basic copolymer, identical to Applicant's component B and teaches that this copolymer can be blend (see line 5-20,column 9) with other polymers in order to obtain oriented optical film exhibiting negative birefringence, retardation and specific relation between refractive indexes.(see abstract, line 45 –60,column 5).

It is clear that film of same composition and thickness will be capable have same Retardation properties, as claimed in Claim 10 and will be capable undergo orientation in order to meet specific relation between refractive indexes as claimed in Claims 5 and 6.

Therefore , it would have been obvious to one of ordinary skill in the art at the time of the invention blend component A per teaching of Satoshi and component B per teaching of Arakawa, in order to obtain optical film exhibiting negative birefringence, specific relation between refractive indexes and retardation properties, and with wide processing window and comparatively high heat resistant.

Regarding limitation of newly added Claim 15: Copolymer disclosed by Satoshi et al.(JP 05-117334) satisfied limitation of "**consisting essentially of**" because copolymer can comprise only two components – same components as claimed by applicant – (due to molar ratio(see claim 1 of Satoshi below) as 100/0 – presence of the component II is not a requirement) :

J-P-A-5-117334 (May 14, 1993)

[Claims]

1. A maleimide-based copolymer comprising at least one of N-phenyl substituted maleimide units represented by the following formula (I),

at least one of N-alkyl maleimide units represented by the following formula (II),

and ct-olefin units represented by the following formula (III), wherein ((I)+(II)) is 30-98 mol%, (III) is 70-2 tool%,

(I)/(II) molar ratio is ***100/0*** to 1/99 .

Response to Arguments

6. Applicant's arguments filed on January 11,2007 have been fully considered but they are not persuasive.

6.1. Regarding Applicant's arguments related to Double Patenting rejection of Claims 3-6 and 10 – 15 over U.S. Patent No. 7,001,967 in view of information admitted by Applicant(see paragraph [0004] and [0005],page 1) and in further view of Arakawa et al.(US 5,213,852):

i) Arakawa as a Secondary reference does not need disclose both components claimed by Applicant - teaching of Arakawa made obvious for one of ordinary skill in the art to be motivated to use secondary component as acrylonitrile-styrene copolymer in combination with first component as specific olefin and N-phenyl-substituted maleimide this component disclosed by Primary reference - U.S. Patent No. 7,001,967.

ii) Regarding reference to information admitted by applicant in the rejection: Applicant wrote - see [0005] of the Specification " ***It is known that with respect to maleimide based copolymers, a copolymer comprising a phenylmaleimide residual group and an ct-olefin residual group exhibits thermodynamic miscibility within a specific proportion range in a blend with a copolymer comprising a styrene residual group and an acrylonitrile residual group (see, for example, U.S. Patent No. 4,605,700)".***

Thus, one of ordinary skill in the art will be motivated to use phenylmaleimide residual group and an ct-olefin residual group within a specific proportion range in a blend with a copolymer comprising a styrene residual group and an acrylonitrile residual group due to thermodynamic miscibility ***as it done by applicant.***

iii) Regarding Applicant statement that " The resulting film have cracks and brittle or have inferior heat resistance" – this argument is irrelevant to claimed subject matter of any claims in the application : In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (cracks, heat resistance) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

6.2. Regarding Applicant's arguments related rejection of Claims 3-6 and 10 under 35 U.S.C. 103(a) see discussion above –paragraph 6.1.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gennadiy Mesh whose telephone number is (571) 272 2901. The examiner can normally be reached on 8a.m - 4 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gennadiy Mesh
Examiner
Art Unit 1711

GM
02/22/07

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700